

**MASTER MINDS OF INVENTION**

Epoch-Making Devices Conceived by Nine Americans.

**NOTED NAMES ON THE LIST**

A Review of the Nation's Leading Inventors, Whose Ideas Have Made Stage in Civilization's Progress.

George Westinghouse stood ninth in the list of American inventors—not in point of achievement, but in respect of fertility. Nearly 500 patents stand to his credit.

He began life as a machinist, and was only 21 years old when he applied to Cornelius Vanderbilt for help in the introduction of his air-brake to use on the railroads. The great man laughed to scorn the idea of "stopping trains with wind," and dismissed him, saying that he "had no time to waste on fools."

It was the air-brake, however, that made high speed railroading possible. The invention was therefore an epoch-maker—one of two such which sprang from Westinghouse's brain, the other being the harnessing of the alternating electric current, which was destined to become the basis of enormous new industries.

Every now and then an invention is made that radically alters the conditions of civilization. The telephone was such an invention; so likewise was the airplane.

Dr. Emile Berliner—the man whose improvements in the telephone made it possible to talk over long distances—said, the other day, that in effect there had been no epoch-making invention from the time of Archimedes to the year 1428 A. D., when the printing press came into existence. The next one was the telescope, in 1608, and then a century and a half elapsed before the arrival of the steam engine. Photography followed in 1839, magneto-electricity in 1831, the telegraph in 1844 and the telephone in 1876.

Since the introduction of the telephone, it might be said, epoch-making inventions have followed one another with astonishing rapidity, among them being the electric light, the X-rays, color photography, liquid air, wireless telegraphy and radium. Not all of these can be properly said to have altered the conditions of civilization, but even liquid air and radium represent discoveries which mark important steps in the development of human knowledge.

**Beginnings of Electric Light.**

Speaking of the electric light, Dr. Berliner said: "In 1857 there was at the capital in Washington, near the dome upstairs, a large room in which was a big battery consisting of about 100 jars full of sulphuric acid and water, each containing a piece of carbon and a piece of zinc. On the Fourth of July the daily papers announced, 'Tonight the electric light will be shown from the Capitol.' Everybody was down on Pennsylvania avenue to see it. All at once we beheld a brilliant light in the lower part of the dome. Presently it went out, and perhaps twenty minutes later the electrician managed to get it going again, and we had another glimpse of the wonderful electric illumination. It was quite an interesting exhibition, and everybody enjoyed it highly."

In point of fertility, Thomas A. Edison stands first in the list of American inventors, with over 800 patents. Next comes Francis H. Richards, with 600 odd—mainly in the line of weighing machines. Two electricians follow—Elliott Thomson and Charles E. Scribner. Fifth is Luther C. Crowell, who has done so much to develop the art of printing.

Next in order is Robert L. Hunter, whose 800 patents exhibit a most versatile genius, relating as they do to many different kinds of ideas, from electric railways and electric lamps to dental engines and theater chairs. Others among the first ten American inventors are John W. Hyatt, whose contrivances relate largely to the lighting of subterranean places, and Charles J. Van Depoele, who has specialized in trolleys and electric roads.

Van Depoele, by the way, was a cabinet-maker in Detroit when he took up the study of electricity as an amusement for his evenings. He originated the under-running trolley system. Corliss, the inventor of steam engines, made his experiments after working twelve hours a day as a meat-cutter. William Herchel, an astronomer, built his wonderful instruments and astonished the world by his discoveries while earning a living by playing the fiddle at dances and concerts.

**Talking Machine and Telephone.**

The talking machine is one of the epoch-makers in the history of the invention of the telephone. More than forty years ago, as many people now living will remember, P. T. Barnum exhibited, as one of the attractions of his circus, a machine that was supposed to talk. It made some very queer noises which might be understood to counterfeited human speech, with the help of a strong imagination. Its construction was a secret, and the actual nature of its mechanism there seems to be no record extant. The real talking machine, invented by Edison, did not come into existence until 1878.

The nineteenth century has often been called the "century of invention." As a matter of fact, the real century of invention did not begin until 1820—when it was inaugurated by the discovery of photography—so that, as one might say, it is by no means yet. Since that date there has been a steady acceleration of mechanical discoveries, and in this line no period of equal length has been so productive as the opening years of the twentieth century—the most remarkable achievement being the actual realization, in the practical flying machine of what mankind had come to regard as a mere dream of the visionary.

Human flight first became an accomplished fact in 1903. It must be admitted, however, the idea of the aeroplanes is by no means so new. In the Encyclopaedia Britannica of thirty odd years ago will be found, under "flight," a picture of a flying machine almost identical with that of the Wrights. Such being the case, it may be asked, why was it not put to use? The explanation is simply that the only kind of motor then available was the steam motor, which was impossibly heavy. It was the gasoline motor that made flying possible.

If we were to go back to the year 1890, and were deprived of the inventions which have been made during the last thirty-four years, we should have an opportunity to realize the influence which a few men's ideas have had upon the development of civilization. We should find ourselves deprived of telephones, electric cars, bicycles, mechanical typewriters, cash registers and typewriters—

the first writing machine having been put on the market in 1833.

**Results of Evolution.**  
Most great inventions have been the result of gradual evolution. Thus for example, Charles Thurber patented a typewriter as far back as 1843, but it was not a practical machine. The earliest sewing machine, patented by John S. Greenough in 1846, bore small resemblance to the creation of Elias Howe. Graham Bell's first telephone, patented in 1876, is a curiosity, an exhibition in the National Museum in Washington. The receiver is made to thrust into the ear, instead of being held against it. Seventeen years before Edison built the incandescent lamp, John Fitch ran a steamboat between Burlington and Philadelphia at a rate of seven and a half miles an hour. The principle of the screw-propeller was demonstrated as far back as 1811.

Great inventions modify civilization not only by rendering existence easier and more comfortable for mankind at large, but also through the creation of immense industries employing the labor of vast numbers of human beings. Among the most important of them are the agricultural machines which have made practicable the raising of crops far larger than could be produced or garnered without their aid. The self-binding harvester, commercially new since 1830, saves the labor of hundreds of thousands of men.

Indeed, the grain fields of the west could not possibly be reaped by hand. Nor could it be practicable to carry the grain to market without the aid of modern inventions in transportation.

The erection of "skyscraper" office buildings is made possible by processes of steel manufacture not long known. But such buildings could not exist were it not for another invention—namely the elevator, which renders them accessible.

Emile Berliner not only improved the telephone, but was also the inventor of the disk phonograph. He was a poor clerk, and paid a mechanic 50 cents a

night to teach him something about electricity. The teacher was very ignorant of the subject, and that was one reason why Berliner was led off the beaten track, making discoveries of his own. Graham Bell was a school teacher. The men who made the typewriter a practical instrument were two mechanics named C. L. Sholes and W. M. Jenne. Mergenthaler, who invented the mechanical typewriter, was employed at day's wages in making telescopes.

**Newspaper Folders.**  
L. C. Crowell, who made such wonderful things—one of the most important of them being a contrivance for folding, which made possible the present enormous editions of many-paged newspapers—was likewise a mechanic. Charles M. Hall was a student at Oberlin college when he found out how to separate aluminum from its ore. Augustus Schults of New York, who reduced the process of making paper from an affair of a year or two to one of a few weeks, thus revolutionizing the business, was so poor that in the beginning he had to prepare his solutions in tumblers. Gramme, a Belgian, who invented the ring dynamo, was a carpenter by trade, and could hardly read or write. He bought a dictionary and a book on electricity and taught himself.

While availing ourselves of the comforts of a great variety of mechanical inventions, it rarely occurs to us to inquire from whose minds they originally sprang. For instance, there are few everyday contrivances more familiar to the average housewife than the chair which converts itself off-hand into a step-ladder. It is a mighty clever little piece of apparatus, but who thought of it first? The answer is, that it was invented by Benjamin Franklin, who made the first one—now in the possession of the Philosophical society in Philadelphia—for his own use, to enable him to get at the upper shelves of his library in his house on Market street.

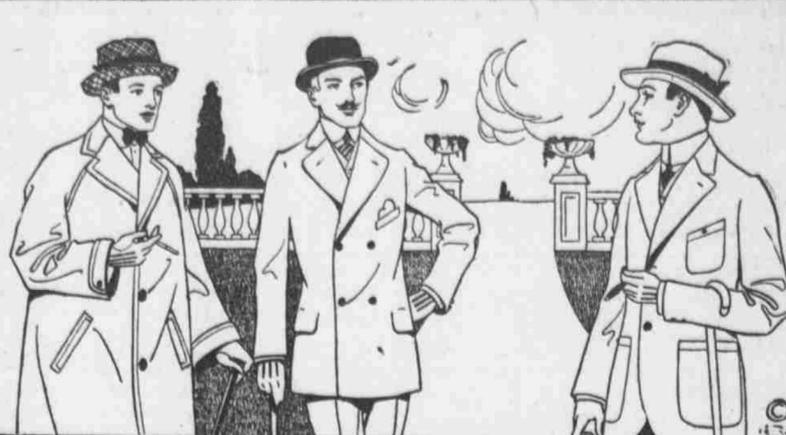
In most business offices there is at least one swivel chair. It enables a person to turn around without moving the legs of the chair, which is a decided convenience. How many people know who its inventor was? The answer is, Thomas Jefferson, whose political opponents referred to it as "Mr. Jefferson's whirling," which he had devised so as to "look all ways at one."

Likewise in most business offices one finds a copying press. This was likewise the invention of Thomas Jefferson. He gave one to General Lafayette, and sent another to Mr. Madison. In 1787, with a letter saying, "Give me a great desire to have a portable copying machine, I planned one in England and had it made. It answers perfectly. I have set a workman to making them, and they are in such demand that he has his hands full."

Mr. Jefferson also invented a walking stick that could be converted into a cane. He used to carry it to church for his own use when services were held in the court house at Charlottesville, and so we were scarce. His most remarkable invention, however, was a plow, which marked a new stage in the development of that most important of all agricultural implements.

There never was but one other president who was an inventor. That was Mr. Lincoln, who devised a steamboat which would lift itself off shoals. But was by no means a practical affair, and the model is now preserved in the national museum as a curiosity.—Hartford Times.

**A Latin Scholar.**  
"My daughter Susie is getting quite an excellent Latin scholar," said the proud father to a visitor. "Here is one of her exercise books, and you can look for yourself." Susie blushed scarlet, and made a wild grab at the book. She was too late, and the delighted visitor read aloud to the company.  
"Rosibus kissibus  
Sweet girlorum;  
Gibibus libibus,  
Wanti somorum."



**Special Purchase Sale of Suits and Coats**

We obtained for this sale hundreds of the latest style suits and coats for men and young men, at heavy discounts from regular prices, because we purchased the entire surplus stocks of a large maker. Men who appreciate a substantial saving on apparel of superior worth will be quick to take advantage of these.

**\$22.50 and \$25.00 Suits Only \$13.75**

In this group are English and semi-English models with soft roll lapel and patch pockets, also conservative styles with two and three-button coats. They are in browns, grays, pencil stripes fancy blue, plain blue serges and Tartan checks. All are \$22.50 and \$25.00 values, at \$13.75.

**\$17.00 and \$20.00 Suits Only \$11.75**

Splendidly tailored suits of pure worsted, cassimeres, silk mixed worsteds, tweeds and blue wool serges, also fancy blue and fancy gray serges. A variety of styles that is broad enough to assure complete satisfaction to every man. Actual \$17.00 and \$20.00 suits, on sale Saturday \$11.75.

**\$12 and \$15 Suits at \$9.75** | **\$12.50 and \$15 Coats at \$8.75**

All wool blue serge suits, guaranteed fast color. Also novelty mixtures, tweeds, cassimeres, in dozens of the best styles for men and young men. All \$12.00 and \$15.00 suits, Saturday at \$9.75. Balmacaan coat, 48 inches long; full skirted; military collar, slash pockets, raglan shouldered and kimono sleeves; made of English tweed finish cloth; \$12.50 and \$15.00 coats, Saturday at \$8.75.

**\$17 Coats at \$11.75** | **Top Coats at \$11.75.** | **Cravenettes, \$8.75**

Balmacaans of imported Scotch tweeds in tan and brown mixtures. Very newest models, such as usually sell up to \$17. Saturday at \$11.75. Staple model top coats, with fly fronts; 44 to 46 inches long. Silk lined to the edge; \$17.00 values; sale Saturday \$11.75. Light weight, plain gray, fancy gray and black cravenette coats, with convertible or military collars; 53 inches long. Values up to \$15.00. On sale Saturday at \$8.75.

**Gabardines at \$8.75** | **Slip-Ons at \$10.** | **Slip-Ons at \$5.98.**

Fashionable gabardine coats in olive and tan shades; convertible collars; raglan or regular shoulders; shower and spot proof; \$15.00 values at \$8.75. These garments are made of double texture fabrics, such as Bombazine twill, Palmotto and rubberized wool materials, in different shades. Worth \$15 to \$20. Saturday at \$10.00. Slip-on rain coats of double texture cloth. Convertible collar, side pockets; 50 to 52 inches long. All sizes, 34 to 46; \$12.00 values. On sale Saturday at \$5.98.



**Stetson Hats, Best Styles at \$3.50**

Every man who wishes to be well dressed must choose the right hat. We suggest the Stetson, known everywhere as the best. The new spring styles are here, and ready for your inspection. Choice of any style at \$3.50.

**Sale of Men's Sample Hats at 50c**

This purchase comprises the entire floor stock of a New York commission house, bought at a great reduction. Soft and stiff hats, including Joseph E. Ward's soft hats of Stockport, England, and other well known makes. These are actual \$1.50 and \$2 values. In one lot Saturday at 50c.

**\$1 Caps at 25c.** | **Wilson's Derbies.** | **Boys' Hats.**  
Men's and boys' new spring caps in the nobby English and golf styles, with leather sweatbands; \$1.00 values, specially priced Saturday at 25c. We are exclusive Omaha agents for Joseph Wilson's & Sons, Denton, England, celebrated derbies at \$2.50. All the latest college styles are featured in these hats for boys. All colors. 50c, 95c and \$1.50.

**Great Sale of Haberdashery**

All the \$1.00 Shirts 65c | All the \$1.25 and \$1.50 Shirts \$1

We have secured an immense quantity of high-grade haberdashery specially for this sale. We took the surplus stocks of several wholesale houses in order to provide these bargains. Several thousand shirts are included at prices far below their usual worth. They are negligee and pleated front styles, with stiff or soft roll collars, carefully made of various high-grade materials. They are in three groups, for quick selling, Saturday.

All the \$1 shirts are— 65c | All \$1.25 and \$1.50 shirts are— \$1 | All \$1.75 to \$2.25 shirts are— \$1.49

**Union Suits.** A fine lot of men's fine Hile union suits, worth up to \$3, to be disposed of at— **95c AND \$1.45**

**Shirts and Drawers.** All the odd lots of men's summer shirts and drawers, Hile, balbrigan and mercerized Hile, worth to \$1.00, at— **35c**

**Union Suits.** Men's spring union suits, Hile or open mesh, long or short sleeves, ankle or knee length; worth to \$1.25. Special... **75c**

All the men's leather belts, mostly in small sizes, and worth up to \$1.00, on sale Saturday... **35c**

All the 25c silk four-in-hand ties at 12 1/2c. | All the silk and silk Hile hose for men, in tan, gray, navy, black and white, and worth 25c, at, pair... **12 1/2c**

**Brandeis Stores**

**1/2 Price SALE OF HAIR GOODS SATURDAY, Second Floor and Pompeian Room.**

- 20-inch natural wavy Switches, \$1 values, at... **50c**
- 22-inch natural wavy Switches, \$3 values, at... **\$1.50**
- 22-inch natural wavy Switches, \$5 values, at... **\$2.50**
- 28-inch natural wavy Switches, \$10 values, at... **\$5.00**

HAIR DRESSING, SHAMPOOING AND MANICURING. APPOINTMENTS BY PHONE.

**Free School of Dressmaking Opens Monday**

Under Direction of Madame Coates, New York and Paris

**Enrollments and Information at the Superintendent's Office, Main Floor.**

**Complete and Practical in Every Way**

This course covers plain and fine needlework, as well as the cutting, fitting, altering, constructing, making and finishing of underwear, waists, skirts, dresses, coats, suits and children's garments—altogether with the principles and use of paper patterns. Each pupil brings her own materials, works on her own garments and makes from one to as many articles as she may choose.

No system charts or "methods" used. The 50 cents which you pay for enrollment is solely for the reservation of a table for you, so women not enrolled and doing no work cannot occupy tables. Our space is limited and Mme. Coates will only teach a limited number of pupils.

**Free Lecture Saturday, 10 a. m. and 2 p. m. Third Floor. Course of 15 Lessons in 5 Weeks**

Make it a point to attend Madame Coates' free lecture Saturday at 10 a. m. or 2 p. m. She explains in detail the work to be done.

**Cold Dry Air Storage For Furs**

The heat of the summer months will quickly ruin your valuable furs. The only way to protect them is to store them in our cold, dry air vaults, where they are also guaranteed against fire, theft, loss or damage of any kind.

The Charges Are Slight.

Phone or write us to explain our system.

**Our Greatest Sale of Lace Curtains Comes Next Monday**

Our greatest sale of lace curtains occurs next Monday. We have bought surplus stocks of large Philadelphia mills so as to offer prices lower than ever before. Don't miss this sale!

**Sale of Wall Paper**

Monday we also begin a sale of wall paper with offerings that have seldom been equalled. Thousands of rolls of the most desirable papers at savings of a fourth, a third or more.

**The "Venus" Bath Spray**

A Twentieth century wonder. Invigorating and refreshing. Regular price \$1. Saturday at 48c.

**Famous Carlsbad Waters**

Which are renowned for their curative qualities, are reproduced in tablet form. 50c size box for 39c.

**Duplex Fireless Cookers**—Not equalled at the Sets—100 pieces, treated prices, \$8.00, \$15.00 and with double band pure coin gold. The set, \$44.50.

**\$2.60 "Wear Ever" Set for \$1.48**

This three-piece "Wear Ever" aluminum set consists of a 1 1/2-quart saucepan, a 4-quart preserving kettle and a 2 1/2-quart double-lipped saucepan. Regular \$2.80 value. Priced for Saturday at \$1.48.

**Vacuum Washing Machines**—Regular price, \$11.50, Saturday for \$9.95.

**BRANDEIS STORES**